UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,659	05/03/2006	Kunihide Fujii	272751US6PCT	8928

22850 7590 03/19/2009

OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER	
DILEVSKI, BORCE	

ART UNIT	PAPER NUMBER
2419	

NOTIFICATION DATE	DELIVERY MODE
03/19/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary	Application No.	Applicant(s)	
	10/538,659	FUJII ET AL.	
	Examiner	Art Unit	
	BORCE DILEVSKI	2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 May 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 June 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *6/10/2005, 12/1/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Detailed Action

1. Claims 1-12 have been examined and are pending.

Information Disclosure Statement

2. Initialed and dated copies of Applicant's IDS form 1449 submitted on 6/10/2005 and 12/01/2006 are attached to the instant Office Action.

Claim Objections

3. **Claim 11** is objected to because of the following informalities: **Examiner believes that a grammatical error exists with applicants phrase of "so sent". Examiner believes that the phrase "to send" was applicant's intention and will interpret it as such**. Appropriate correction is required

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. **Claims 1-12** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 6-8, and 12 recite "modulating means for sending data at one of a plurality of transfer rates by modulating an electromagnetic wave" and "demodulating means for obtaining data sent from another device at one of

the plurality of transfer rates by demodulating the electromagnetic wave". Here it is unclear how the same electromagnetic wave can be used both to send data to other devices and to receive data from other devices. Further, claim 1 recites "said demodulating means obtains the data". It is unclear whether "said demodulating means" refers to the demodulating means in the first or the second communication device.

Claims 2-5 repeatedly refer to "the electromagnetic wave" without distinguishing whether this wave is the wave being sent or being received.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4, 8-9, 11-12 rejected under 35 U.S.C. 102(b) as being anticipated by United States Patent US 6,067,291 to Kamerman et al.

As per claim 1, Kamerman et al teaches a communication system comprising first and second communication devices, wherein said first and second communication devices comprise:

modulating means for sending data at one of a plurality of transfer rates by modulating an electromagnetic wave (Fig. 2 and Col. 3 Lines 63-66, A type of spread spectrum modulation is used within the mobile stations and then transferred over antenna at either 1Mbit/s or 2Mbit/s (plurality) as can be seen in Fig. 2, any waves sent via antenna are electromagnetic waves)**;**

demodulating means for obtaining data sent from another device at one of the plurality of transfer rates by demodulating the electromagnetic wave (Fig. 2 and Col. 3 Lines 63-66, The transceivers have the ability to send and receive using a spread spectrum modulation scheme for sending and therefore requiring a demodulation scheme for receiving to obtain data from the signals)**; and**

detecting means for detecting the electromagnetic wave (Fig. 2 and Col. 4 Lines 1-3, The mobile stations have threshold detection circuits to receive and detect signals)**, and wherein**

said first communication device starts to output the electromagnetic wave when said detecting means does not detect the electromagnetic wave at the level of a first threshold or more (Fig. 4 and Col. 2 Lines 55-58, A defer threshold (first threshold) is set where a network station will transmit signals when the carrier signal is not above this threshold)**, and**

said second communication device requires the electromagnetic wave at the level of a second threshold higher than said first threshold so that said demodulating means obtains the data (Fig. 4 and Col. 2 Lines 49-52, A

carrier detect threshold (second threshold) is set higher than the defer threshold (first threshold) where a network station will process signals only if the carrier signal is more than the carrier detect threshold).

As per claim 2, Kamerman et al teaches a communication system according to claim 1, wherein

said detecting means detects the electromagnetic wave at the level of said first threshold or more and the electromagnetic wave at the level of said second threshold or more (Fig. 2 and Col 4 Lines 1-3, The defer threshold circuit detects a signal at the defer threshold (first threshold) or above and the carrier detect threshold circuit detects a signal at the carrier threshold (second threshold) or above)**, and**

said second communication device obtains the data by said demodulating means when said detecting means detects the electromagnetic wave at the level of said second threshold or more (Col. 2 Lines 49-52, Col. 3 Lines 65-66, and Col. 4 Lines 1-3, The network station will process data if it is received at a level at or above the carrier threshold (second threshold) that is detected by the carrier detect threshold circuit).

As per claim 3, Kamerman et al teaches a communication system according to claim 2, wherein

said first and second communication devices further comprise threshold setting means that sets a threshold of the level of the electromagnetic wave detected by said detecting means (Fig. 2, Col. 2 Lines 50-58 and Col. 4 Lines 3-12, the network stations have a memory to store (set) the values of the defer threshold (first threshold) and carrier detect threshold (second threshold) with parameter values. These values are varied according to certain conditions and they must be set.)**, and**

said detecting means detects the electromagnetic wave at the level of said first threshold or more and the electromagnetic wave at the level of said second threshold or more in accordance with the threshold set by said threshold setting means (Col. 4 Lines 3-12, The parameter values stored (set) in the memory provide a signal to the defer threshold (first threshold) circuit and carrier detect threshold (second threshold) circuit to inform them of what the threshold settings are)**.**

As per claim 4, Kamerman et al teaches a communication system according to claim 1, wherein

said first and second thresholds are set so as to prevent a problem of a hidden-terminal (Fig. 4 and Col. 5 Lines 55-57, The defer threshold (first threshold) and carrier detect threshold (second threshold) settings as in Fig. 4 substantially eliminate the hidden terminal problem)**.**

As per claim 8, Kamerman et al teaches a communication device for receiving and sending data by modulating and demodulating an electromagnetic wave, comprising:

modulating means for sending data by one of a plurality of transfer rates by modulating the electromagnetic wave (Col. 3 Lines 63-66, The network stations can send data at either 1 or 2 Mbit/s (plurality) using a spread spectrum modulation scheme)**; and**

demodulating means for obtaining data sent from another device at one of the plurality of transfer rates by modulating the electromagnetic wave (Col. 3 Lines 63-66, The network stations can receive data at either 1 or 2 Mbit/s (plurality) and since a spread spectrum modulation scheme exists a demodulation scheme exists to obtain data from the signls)**;**

wherein when said other device checks that the electromagnetic wave at the level of a first threshold does not exist and starts to output the electromagnetic wave, the acquisition of data by said demodulating means requires the electromagnetic wave at the level of a second threshold higher than said first threshold or more (Fig. 4 and Col. 2 Lines 49-58, A defer threshold (first threshold) is set where a network station will transmit signals when the carrier signal is not above this threshold. A carrier detect threshold (second threshold) is set higher than the defer threshold (first threshold) where a network station will process (demodulate) signals only if the carrier signal is more

than the carrier detect threshold).

As per claim 9, Kamerman et al teaches a communication device according to claim 8, further comprising:

detecting means for detecting the electromagnetic wave, wherein said demodulating means obtains the data when said detecting means detects the electromagnetic wave at the level of said second threshold or more (Fig. 2. Col. 2 Lines 49-52, Col. 3 Lines 65-66 and Col. 4 Lines 1-3, The mobile stations have threshold detection circuits to receive and detect signals. The network station will process data if it is received at a level at or above the carrier threshold (second threshold) that is detected by the carrier detect threshold circuit).

As per claim 11, Kamerman et al teaches a communication device according to claim 8, wherein

said modulating means modulates the load of the electromagnetic wave generated by said other device so sent the data (Fig. 2 and Col. 3 Lines 65-66, A type of spread spectrum modulation is used within the mobile stations and then transferred over antenna as can be seen in Fig. 2, any waves sent via antenna are electromagnetic waves).

As per claim 12, Kamerman et al teaches a communication method for receiving and sending data by modulating and demodulating an electromagnetic wave, comprising:

a modulating step of sending data at one of a plurality of transfer rates by modulating the electromagnetic wave (Fig. 2 and Col. 3 Lines 63-66, A type of spread spectrum modulation is used within the mobile stations and then transferred over antenna at either 1Mbit/s or 2Mbit/s (plurality) as can be seen in Fig. 2, any waves sent via antenna are electromagnetic waves)**; and**

a demodulating step of obtaining the data sent from another device at one of the plurality of transfer rates by demodulating the electromagnetic wave (Fig. 2 and Col. 3 Lines 63-66, The transceivers have the ability to send and receive using a spread spectrum modulation scheme for sending and therefore requiring a demodulation scheme for receiving to obtain data from the signals),

wherein when said-other device checks that the electromagnetic wave at the level of a first threshold or more does not exist and the output of the electromagnetic wave starts (Fig. 2. Col. 2 Lines 49-52, Col. 3 Lines 65-66 and Col. 4 Lines 1-3, The mobile stations have threshold detection circuits to receive and detect signals. The network station will process data if it is received at a level at or above the carrier threshold (second threshold) that is detected by the carrier detect threshold circuit)**,**

the data acquisition in said demodulating step requires the electromagnetic wave at the level of a second threshold or more higher than said first threshold (Fig. 4 and Col. 2 Lines 49-52, A carrier detect threshold (second threshold) is set higher than the defer threshold (first threshold) where a network station will process signals only if the carrier signal is more than the carrier detect threshold).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 5-7, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamerman et al further in view of United States Patent US 6,127,979 to Zhou et al.

As per claim 5, Kamerman et al teaches a communication system according to claim 1, wherein the data is received/sent by the electromagnetic wave (Col. 3 Lines 63-66, The mobile stations send and receive data) **but fails to teach where the electromagnetic wave is sent via a coil antenna. However, Zhou et al teaches sending and receiving waves over a coil antenna** (Zhou, Col. 2 Lines 1-2 and Lines 17-19, A coil antenna is used with a cellular radio telephone)**.**

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the wire antenna in the transceiver of Kamerman et al with the use of a coil antenna taught by Zhou et al because (Col. 3 Lines 66-67 and Col. 4 Lines 1-4) **the use of a helical coil antenna allows the transmission and reception of signals in certain frequency bands while conserving space.**

As per claim 6, Kamerman et al teaches a communication device for receiving and sending data by modulating and demodulating an electromagnetic wave, comprising:

modulating means for sending the data at any of a plurality of transfer rates by modulating the electromagnetic wave (Col. 3 Lines 63-66, The network stations can send data at either 1 or 2 Mbit/s (plurality) using a spread spectrum modulation scheme)**;**

demodulating means for obtaining the data sent from another device at any of a plurality of transfer rates by demodulating the electromagnetic wave (Col. 3 Lines 63-66, The network stations can receive data at either 1 or 2 Mbit/s (plurality) and since a spread spectrum modulation scheme exists a demodulation scheme exists to obtain data from the signls)**; and**

detecting means for detecting the electromagnetic wave, wherein the output of the electromagnetic wave starts when said detecting means does not detect the electromagnetic wave at the level of a first threshold or more (Fig. 2, Fig. 4, Col. 2 Lines 55-58 and Col. 4 Lines 1-3, The mobile stations have threshold detection circuits to receive and detect signals. A defer threshold (first threshold) is set where a network station will transmit signals when the carrier signal is not above this threshold)**, and**

the data is communicated with said other device at the position where the electromagnetic wave reaches at the level of a second threshold or more that is higher than said first threshold (Fig. 4 and Col. 2 Lines 49-52, A carrier detect threshold (second threshold) is set higher than the defer threshold (first threshold) where a network station will process signals only if the carrier signal is more than the carrier detect threshold)**.**

But Kamerman et al is silent on a electromagnetic-wave generating means for generating an RF (Radio Frequency) field by generating the electromagnetic wave. However, Zhou et al teaches generating an RF field

with electromagnetic waves (Zhou, Col. 2 Lines 35-41, A transceiver processes radio frequency signals and transmits the signals over an antenna)**;**

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the types of waves being sent and received of Kamerman et al with the use of radio frequency waves for sending and receiving information because the use of radio frequency waves allows for the communication with many types of devices over frequency bands such as GSM, DCS, PCS (Zhou, Col. 1 Lines 10-25)**.**

As per claim 7, Kamerman et al teaches a communication method for receiving and sending data by modulating and demodulating an electromagnetic wave, comprising:

a modulating step of sending the data by any of a plurality of transfer rates by modulating the electromagnetic wave (Col. 3 Lines 63-66, The network stations can send data at either 1 or 2 Mbit/s (plurality) using a spread spectrum modulation scheme)**;**

a demodulating step of obtaining the data sent from another device by any of a plurality of transfer rates by demodulating the electromagnetic wave (Col. 3 Lines 63-66, The network stations can receive data at either 1 or 2 Mbit/s (plurality) and since a spread spectrum modulation scheme exists a demodulation scheme exists to obtain data from the signls)**; and**

a detecting step of detecting the electromagnetic wave, wherein the output of the electromagnetic wave starts when said detecting step does not detect the electromagnetic wave at the level of a first threshold or more (Fig. 2, Fig. 4, Col. 2 Lines 55-58 and Col. 4 Lines 1-3, The mobile stations have threshold detection circuits to receive and detect signals. A defer threshold (first threshold) is set where a network station will transmit signals when the carrier signal is not above this threshold)**, and**

the data is communicated with said other device at the position where the electromagnetic wave reaches at the level of a second threshold or more that is higher than said first threshold (Fig. 4 and Col. 2 Lines 49-52, A carrier detect threshold (second threshold) is set higher than the defer threshold (first threshold) where a network station will process signals only if the carrier signal is more than the carrier detect threshold)**.**

But Kamerman et al is silent on an electromagnetic-wave generating step of generating an RF (Radio Frequency) field by generating the electromagnetic wave. However, Zhou et al teaches generating an RF field with electromagnetic waves (Zhou, Col. 2 Lines 35-41, A transceiver processes radio frequency signals and transmits the signals over an antenna)**;**

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the types of waves being sent and received of Kamerman et al with the use of radio frequency waves for sending and receiving information because the use of radio frequency

waves allows for the communication with many types of devices over frequency bands such as GSM, DCS, PCS (Zhou, Col. 1 Lines 10-25)**.**

As per claim 10. Kamerman et al teaches a communication device according to claim 9, further comprising:

said detecting means detects the electromagnetic wave at the level of said first threshold or more and the electromagnetic wave at the level of said second threshold or more (Fig. 2 and Col 4 Lines 1-3, The defer threshold circuit detects a signal at the defer threshold (first threshold) or above and the carrier detect threshold circuit detects a signal at the carrier threshold (second threshold) or above)**, and**

an output of the electromagnetic wave from said electromagnetic-wave generating means is started when said detecting means does not detect the electromagnetic wave at the level of said first threshold or more (Fig. 2, Fig. 4, Col. 2 Lines 55-58 and Col. 4 Lines 1-3, The mobile stations have threshold detection circuits to receive and detect signals. A defer threshold (first threshold) is set where a network station will transmit signals when the carrier signal is not above this threshold)**.**

and also teaches wherein said modulating means sends the data by modulating the electromagnetic wave outputted by said electromagnetic wave (Fig. 2 and Col. 3 Lines 65-66, A type of spread spectrum modulation is used within the mobile stations and then transferred over antenna as can be

seen in Fig. 2, any waves sent via antenna are electromagnetic waves) **but is silent on an electromagnetic-wave generating means for generating an RF (Radio Frequency) field by generating the electromagnetic wave. However, Zhou et al teaches generating an RF field with electromagnetic waves** (Zhou, Col. 2 Lines 35-41, A transceiver processes radio frequency signals and transmits the signals over an antenna)**;**

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the types of waves being sent and received of Kamerman et al with the use of radio frequency waves for sending and receiving information because the use of radio frequency waves allows for the communication with many types of devices over frequency bands such as GSM, DCS, PCS (Zhou, Col. 1 Lines 10-25)**.**

Conclusion

7. Prior arts made of record, not relied upon:

US 2003/0125065 A1 to Barak et al discloses a method and apparatus for generating an output signal

US 2001/0000959 A1 to Campana discloses a system and method of radio transmission between a radio transmitter and radio receiver

US 5,722,059 to Campana discloses a radio receiver for use in a radio tracking system and a method of operation thereof

US 6,998,985 B2 to Reisman et al discloses a monitoring and tracking system

US 6,005,885 To Warren et al discloses a reception suspending system for remote radio receivers used in direct sequence spread communication system applied in navigation radar, commercial data transmission etc.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BORCE DILEVSKI whose telephone number is (571)270-7154. The examiner can normally be reached on M-F 7:30AM - 5:00PM or Flexible.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Ryman can be reached on (571)272-3152. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BD

/Daniel J. Ryman/
Supervisory Patent Examiner, Art Unit 2419